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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/802,498

03/16/2004

Masahito Yamazaki

CFA00067US

3662

34904

7590

03/05/2008

CANON U.S.A. INC. INTELLECTUAL PROPERTY DIVISION

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EXAMINER

DICKER, DENNIS T

ART UNIT

PAPER NUMBER

2625

MAIL DATE

DELIVERY MODE

03/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/802,498

Applicant(s)

YAMAZAKI ET AL.

Examiner

Dennis Dicker

Art. Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-11 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-11 and 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claim 9-11 are withdrawn in view of the discovered reference(s) to Sasaki (hereinafter "Sasaki '051" 4,969,051) Rejections based on the cited reference(s) follow.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 9-11 and 18-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Yabe '415 in view of Sasaki '051.

With respect to **Claim 9**, Yabe '415 teaches a printer driver which operates in a terminal (i.e., **10 of Fig. 1, scanner generates image data to be outputted by printer**) connectable to an image input/output system (i.e., **Fig. 1, scanner is connectable to image output system**) including obtaining means (i.e., **70 of Fig. 1, CPU**) for obtaining a print-job that includes printing-mode information and print-data (i.e., **, CPU obtains print job which include print mode information [histogram of image data] and print data from scanner**), analyzing means (i.e., **71 of Fig. 1, Judgment unit**) for analyzing the printing-mode information (i.e., **Col. 3 lines 33-35, judgment unit analyzes print mode information**) to determine whether an output mode of the print-data is a high-contrast output mode (i.e., **Col. 3 lines 34-36,**

judgment unit determines whether an output mode of the print data is a high contrast output mode [image mode]) or a low-contrast output mode (i.e., Col. 3 lines 34-36 , judgment unit determines whether an output mode of the print data is a low contrast output mode [character mode]), and generating means (i.e., Col. 3 lines 63-65, CPU controls each process unit) for generating image data according to the output mode (i.e., Col. 3 lines 35-46, generating means for generating image data according to output mode full color or monochrome), the image data in the high-contrast output mode being generated by calculating color-space conversion of the print-data at a high bit-depth (i.e., Col. 3 lines 40-43, image data judged to be in a high contrast output mode [image mode] being generated by calculating color conversion of the print data in a high bit depth [full color]), the image data in the low-contrast output mode being generated by calculating the color-space conversion of the print-data at a low bit-depth (i.e., Col. 3 lines 50-52 , image data judged to be in a low contrast output mode [character mode] being generated by calculating color conversion of the print data in a high bit depth [monochrome]), and generates the print-job output to the image input/output system (i.e., Col. 3 lines 26-31 , the print job output is generated for the printer).

Yabe '415 does not explicitly teach a print driver comprising low-contrast setting means for setting an output mode of print-data to be output to the image input/output system to a low-contrast output mode; high-contrast setting means for setting the output mode of print-data to be output to the image-processing device to a high-contrast output mode if monochrome output was not selected for the print-data and at least one of the

picture objects included in the print-data is a color object; low-contrast generating means for generating printing-mode information having information for low-contrast output mode if the output mode of the print- data to be output by the image input/output system is the low-contrast mode; high-contrast generating for generating printing-mode information having information for high-contrast output mode if the output mode of the print- data to be output by the image input/output system is the high-contrast mode; and print generating means for generating the print-job that includes the print- data and the printing-mode information generated by the low-contrast generating means and the high-contrast generating means.

However, the mentioned claimed limitations are well known in the art as evidenced by Sasaki '051, In particular, Sasaki '051 teaches the use of a print driver comprising low-contrast setting means (i.e., **K12 of Fig. 6, Low contrast setting means on Console board**) for setting an output mode of print-data to be output to the image input/output system to a low-contrast output mode (i.e., **Col. 7 lines 17-19 and lines 21-29, low contrast setting means set output mode of the print data to a low contrast output mode in the image image/output system**); high-contrast setting means (i.e., **K11 of Fig. 6, high contrast setting means on Console board**) for setting the output mode of print-data to be output to the image-processing device to a high-contrast output mode (i.e., **Col. 7 lines 14-21 , high contrast setting means sets the output mode of the print data to a high contrast output mode in the image image/output system**) if monochrome output was not selected for the print-data and at least one of the picture objects included in the print-data is a color object (i.e., **Col. 10**

lines 14-24 and Col. 7 lines 14-21, if manual monochrome was not selected an automatic setting would be set and depending on the print data if a picture object has color object included in the print data a high contrast output mode would be set); low-contrast generating means (i.e., 123 of Fig. 5, Modulation transfer function) for generating printing-mode information having information for low-contrast output mode (i.e., Col. 14 line 56-Col. 15 line 7, modulation transfer function circuit generates print mode information having information for a low contrast output with respect to the low contrast input data of fig. 15A-15B) if the output mode of the print- data to be output by the image input/output system is the low-contrast mode (i.e., Col. 12 lines 40-45, low contrast generating means generating print data to be outputted if the mode is set to low contrast); high-contrast generating means (i.e., 123 of Fig. 5, Modulation transfer function) for generating printing-mode information having information for high-contrast output mode (i.e., Fig. 14A and Col. 14 lines 43-55, modulation transfer function circuit generates print mode information having information for a high contrast output with respect to the high contrast input data of Fig. 14A-14B) if the output mode of the print- data to be output by the image input/output system is the high-contrast mode (i.e., Col. 12 lines 40-45, high contrast generating means generating print data to be outputted if the mode is set to high contrast); and print generating means (i.e., 110 of Fig. 2, Image processing Unit) for generating the print-job that includes the print- data and the printing-mode information generated by the low-contrast generating means and the high-contrast generating means (i.e., Col. 7 lines 14-29, the image processing unit generates the print job

that includes the print data and the print mode information generated by the low contrast generating means for the low contrast portion of the print data and the high contrast generating means for the high contrast portion of the print data).

In view of this, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify the print driver of Yabe '415 as taught by Sasaki '051 since Sasaki '051 suggested that such a modification would provide a more accurate and effective print out of low contrast and high contrast data.

With respect to Claims **10 and 18**, Yabe teaches an image input/output system and method (i.e., **Fig. 1, image output system**) comprising: obtaining means (i.e., **70 of Fig. 1, CPU**) for obtaining a print-job that includes print-data (i.e., **Col. 3 lines 33-65, CPU which controls all the processors obtains a print job that includes print data from scanner**);

Yabe '415 analyzing means does not explicitly teach analyzing print-data to determine the presence of a picture object for color-output in the print-data; and generating means for generating image data by calculating color-space conversion for the print-data at a high bit-depth if the presence of the picture object for color-output is determined and by calculating the color-space conversion at a low bit-depth if the presence of the picture object for color-output is not determined.

However, the mentioned claimed limitations are well known in the art as evidenced by Sasaki '051, In particular, Sasaki '051 teaches the use of an analyzing means (i.e., **127 or 128 of Fig. 5, Density Detection circuit**) for analyzing the print-data to determine the presence of a picture object for color-output in the print-data (i.e.,

Col. 9 lines 50-55, density detection circuit analyzes print data to determine presence of picture object for color output according to threshold value as seen in Fig. 14A); and generating means (i.e., 123 of Fig. 5, Modulation transfer function) for generating image data by calculating color-space conversion for the print-data at a high bit-depth (i.e., Fig. 14A and Col. 5 lines 13-15, modulation transfer function generates image data by calculating color space conversion at a high bit depth depending on print mode information from print data) if the presence of the picture object for color-output is determined (i.e., Col. 7 lines 18-21, generating means generates print data for color output [high density] if a picture object is determined); and by calculating the color-space conversion at a low bit-depth (i.e., 15A and Col. 5 lines 21-24, modulation transfer function generates image data by calculating color space conversion at a low bit depth depending on print mode information from print data) if the presence of the picture object for color-output is not determined (i.e., Col. 7 lines 21-29, generating means generates print data for monochrome output[low density] if a picture object is not determined)

In view of this, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify the print driver of Yabe '415 as taught by Sasaki '051 since Sasaki '051 suggested that such a modification would provide a more accurate and effective print out of low contrast and high contrast data.

With respect to **Claims 11 and 19**, Yabe '415 does not explicitly teach an image input/output system, wherein the generating means generates the image data without

calculating the color-space conversion for the print-data if the picture object in the print-data is to be rendered by a predetermined property and color.

However, the mentioned claimed limitations are well known in the art as evidenced by Sasaki '051. In particular, Sasaki '051 teaches an image input/output system, wherein the generating means (**i.e., 123 of Fig. 5, Modulation transfer function**) generates the image data without calculating the color-space conversion for the print-data if the picture object in the print-data is to be rendered by a predetermined property and color (**i.e., Col. 10 lines 3-11, when manual low density mode is selected an assumption for monochrome output is set and therefore the picture object is to be rendered in a predetermined property and color of monochrome without calculating the color space conversion for the print data**).

In view of this, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify the print driver of Yabe '415 as taught by Sasaki '051 since Sasaki '051 suggested that such a modification would provide a more accurate and effective print out of low contrast and high contrast data.

With respect to **Claim 20**, Yabe teaches a computer-readable medium having computer-executable instructions stored thereon for performing an image input/output method (**i.e., Col. 9 lines 50-59, computer readable medium having computer executable instructions stored for performing an image output method**) comprising: obtaining a print-job that includes print-data data (**i.e., , CPU obtains print job that includes print data from scanner**);

Yabe '415 does not explicitly teach an image input/output method for analyzing the print-data to determine the presence of a picture object for color-output in the print-data; and generating image data by calculating color-space conversion for the print-data at a high bit-depth if the presence of the picture object for color-output is determined and by calculating the color-space conversion at a low bit-depth if the presence of the picture object for color-output is not determined.

However, the mentioned claimed limitations are well known in the art as evidenced by Sasaki '051. In particular, Sasaki '051 teaches the use of an image input/output method for analyzing the print-data to determine the presence of a picture object for color-output in the print-data (i.e., Col. 9 lines 50-55, **density detection circuit analyzes print data to determine presence of picture object for color output[high density] according to threshold value as seen in Fig. 14A**); and generating image data by calculating color-space conversion for the print-data at a high bit-depth (i.e., 14A and Col. 5 lines 13-15, **modulation transfer function generates image data by calculating color space conversion at a high bit depth depending on print mode information from print data**) if the presence of the picture object for color-output is determined (i.e., Col. 7 lines 18-21, **generating means generates print data for color output if a picture object is determined**) and by calculating the color-space conversion at a low bit-depth (i.e., 15A and Col. 5 lines 21-24, **modulation transfer function generates image data by calculating color space conversion at a low bit depth depending on print mode information from print data**) if the presence of the picture object for color-output is not determined (i.e., Col. 7 lines 21-

29, generating means generates print data for monochrome output if a picture object is not determined).

In view of this, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify the print driver of Yabe '415 as taught by Sasaki '051 since Sasaki '051 suggested that such a modification would provide a more accurate and effective print out of low contrast and high contrast data.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Dicker whose telephone number is (571) 270-3140. The examiner can normally be reached on Monday -Friday 7:30 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Lamb can be reached on (571) 272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information
system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DD

2/27/2008

Gabriel Garcia

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PRIMARY EXAMINER